



RIPE Labs

Operators Tools, Ideas and Analysis

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What is RIPE Labs?



- It is a web site, but more importantly:
 - A platform and a tool **for the community**
- You can
 - Test and evaluate new tools and prototypes
 - Contribute new ideas and research results
 - Discover and discuss in forums and blogs

<http://labs.ripe.net/>





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RIPE Labs

Innovative Internet tools & ideas

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- ✓ Share experience
- ✓ Showcase tools
- ✓ Present research

New contributions



tagcloud

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0 comments **ExaBGP - A new Tool to Interact with BGP**
 Thomas Mangin — 08 July 2010 10:10

ExaBGP is a new application designed to provide an easy way for programmers and system administrators to interact with BGP networks.

Tags: tools, routing

[» Read more](#)

0 comments **Economic Incentives for Cooperation to Fight Spam**
 John S. Quarterman — 06 July 2010 09:30

Users of gmail or Yahoo mail may not notice because those services filter pretty effectively, but around 90% of all email is spam, and the situation is not getting better.

api apnic
 arin dns
 dnssec
 database
 netsense pi rex
 ripe 59 ripe 60 ripe
 db ripe meeting
 ripe ncc rpsl
 allocation
 experts ipv4 ipv6
 ipv6 adoption

Thomas Mangin published a new open source tool to interact with #BGP on RIPE Labs: <http://bit.ly/aMtsT7> #RIPELabs
 08 July 2010 11:22

A team at the university of Texas is advocating more cooperation in fighting spam. Read more on RIPE Labs: <http://bit.ly/bVfrFG>
 06 July 2010 11:38

Part 2 of IPv6 Measurement compilation published on RIPE Labs: <http://labs.ripe.net/content/ipv6-measurements-compilation-part-2>
 22 June 2010 15:30



Improvements on RIPE Labs



- Better navigation and search
 - Tag cloud, live search, long-term project pages
- Easier communication and participation
 - No need to register to leave comments
 - Registration only necessary for contributions and data repository project



Currently on RIPE Labs

tagcloud

api apnic
arin dns
dnssec
database
netsense pi rex
ripe 59 ripe 60 ripe
db ripe meeting
ripe ncc rpsl
allocation
ipv4 ipv6 ipv6
adoption
measurements
policy
root-servers
routing
statistics
tools

IPv4 and IPv6 Measurements

DNS and DNSSEC Related Data and Tools

RIPE Database API and Abuse Finder Tool

BGP Tool

BGP Route Origin Validation

Various Stats and Measurements

and much more ...



IPv6 Measurements



IPv6 Measurements Compilation

Measuring IPv6 at Web Clients & Caching Resolvers

IPv6 Ripeness

IPv6 CPE Survey (*NEW*)



A Compilation of IPv6 Measurements



- List of IPv6 measurements and tools from various sources with a short description and links to the tools and results
 - Second part published recently
- Please let us know what type of measurements would be helpful
- Also let us know if you know of any other measurements



IPv6 at Web Clients & Resolvers



- When people connect to servers we measure

- IPv4 capability
- IPv6 capability
- IPv4/IPv6 preference

	labs	www
number of measurements	768	8176
web client IPv6 preference	7.2%	1.4%
web client IPv6 capability	9.2%	3.5%
resolver IPv6 capability	11.0%	5.0%

- More resolvers (4.9%) than clients (1.2%) have native IPv6 connectivity
 - Clients will increase over time
 - We will continue measurements



IPv6 CPE Survey



- Survey among vendors of Customer Premise Equipment
- Results will be updated regularly

	AVM (FRITZ!Box)	Draytek	Zyxel	Juniper (ScreenOS)	Juniper (JUNOS)	Cisco
Hardware version required	7270, 7570	Vigor 2130 series, vigor 120	All models released in 2010	All	All	Most SOHO boxes
Minimum software level required	"Labor" only	2130:v1.3.0 120:v3.2.4.3	Per model, check vendor	6.1	10.2	12.4T or 15
Status	Beta	General deployment	Beta	General deployment	Early deployment	General deployment

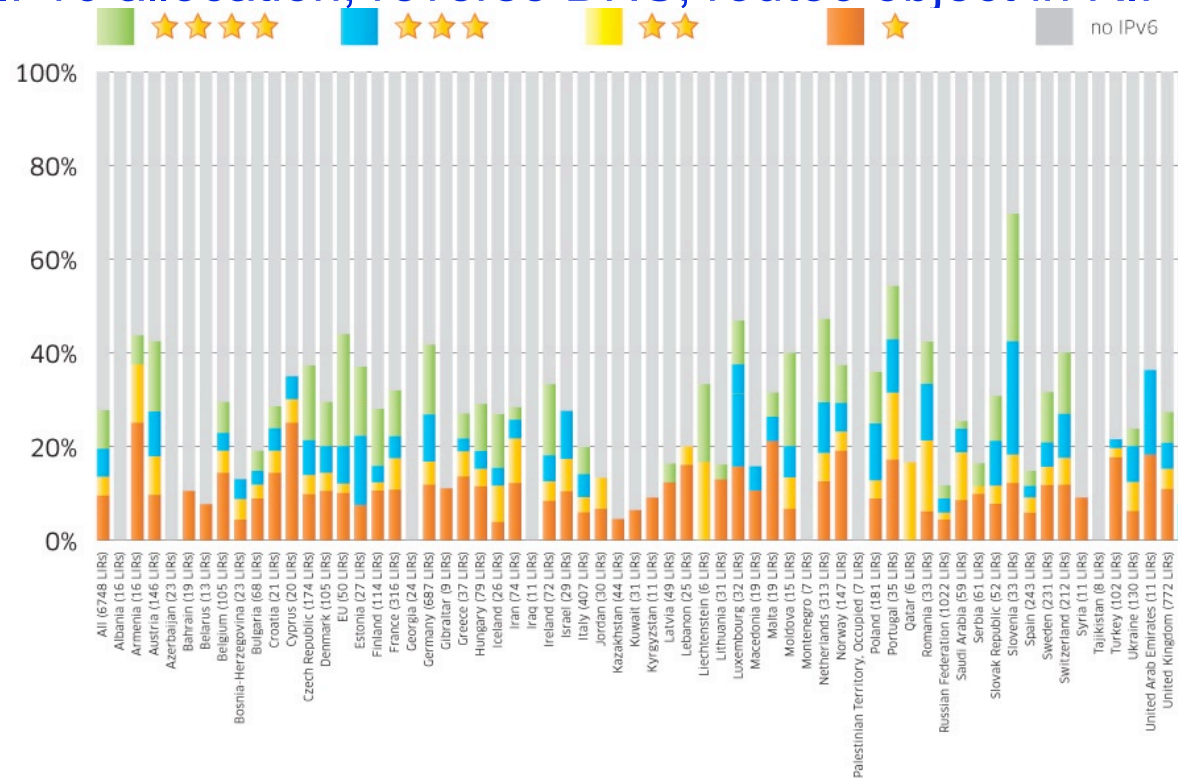
WAN layer 2						
Docsis 3.0	vendor	no	no	no	no	-
ADSL 2+	confirmed	120 only	vendor	confirmed	confirmed	confirmed
VDSL	confirmed	no	vendor	no	vendor	-
Ethernet	confirmed	vendor	vendor	confirmed	confirmed	confirmed
FTTx	-	vendor	vendor	no	no	-
WAN Layer 3						
PPPoA	confirmed	no	vendor	no	vendor	confirmed
PPPoE	confirmed	confirmed	vendor	confirmed	confirmed	confirmed
RFC1483/bridge	vendor	no	vendor	no	no	-
RFC1483/routed	-	-	vendor	vendor	vendor	-
Plain IP	-	vendor	vendor	confirmed	confirmed	confirmed
WAN address acquiring						
PPP link local only (unnumbered)	confirmed	confirmed	vendor	confirmed	confirmed	confirmed



IPv6 Ripeness



- Rating system for LIRs/ISPs based on criteria
 - IPv6 allocation, reverse DNS, route6 object in RIPE DB



<https://labs.ripe.net/Members/mirjam/ipv6-ripeness-update-and-methodology/>



DNS Related Tools



- DNSSEC for the root zone
 - Monitoring the signing of K-root
- DNS reply-size tester
 - Easy tool to determine maximum size of DNS response packets your resolver can handle
 - Many people downloaded tool
 - First Results published



RIPE Database – New Tools



- Whois data via RESTful Web
- RIPE Database queries including search
- Abuse Finder – A tool to find all abuse related contact information

This application uses the [RIPE Database REST API](#).

The RIPE Database is subject to Terms and Conditions. See <http://www.ripe.net/db/support/db-terms-conditions.pdf>

RIPE Database

Search (returns max 100 objects per query)

Query string, you can specify up to five comma separated keys:

Sources	Types	Flags	Inverse lookup
<input type="checkbox"/> abuse-mailbox	<input checked="" type="checkbox"/> admin-c	<input type="checkbox"/> auth	<input type="checkbox"/> author
<input type="checkbox"/> irt-nfy	<input type="checkbox"/> local-as	<input type="checkbox"/> mbrs-by-ref	<input type="checkbox"/> member-of
<input type="checkbox"/> mnt-irt	<input type="checkbox"/> mnt-lower	<input type="checkbox"/> mnt-nfy	<input type="checkbox"/> mnt-ref
<input type="checkbox"/> nserver	<input type="checkbox"/> org	<input type="checkbox"/> origin	<input type="checkbox"/> person
<input type="checkbox"/> rev_srv	<input type="checkbox"/> sub-dom	<input checked="" type="checkbox"/> tech-c	<input type="checkbox"/> upd-to
			<input type="checkbox"/> zone-c
			<input type="checkbox"/> fingerpr
			<input type="checkbox"/> form
			<input type="checkbox"/> mnt-by
			<input type="checkbox"/> mnt-domains
			<input type="checkbox"/> mnt-routes
			<input type="checkbox"/> notify
			<input type="checkbox"/> ref-nfy
			<input type="checkbox"/> referral-by



BGP, Routing, Other



- ExaBGP (Thomas Mangin)
 - A new tool to interact with BGP
- BGP Route Origin Validation
 - Effects of BGP route origin validation on mis-announcements and hijackings
- Economic Incentives for Cooperation to Fight Spam (John S. Quarterman & Team)
 - “The white hats also need more economic incentives to fight spam more affectively”



Why RIPE Labs?



- Faster, tighter innovation cycle
 - Provide useful prototypes to you earlier
 - Adapt to the changing environment more quickly
- Closer involvement of the community
 - Openness
 - Make feedback and suggestions easier and more effective



Questions or Suggestions



- Please take a look and **participate**
- Questions or comments
 - mir@ripe.net or labs@ripe.net

<https://labs.ripe.net/>